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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 0104

Application Number: 10/082,375
Filing Date: February 25, 2002
Appellant(s): BIBLE ET AL.

Alexander P Brackett
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed December 29, 2003.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The brief does not contain a statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief. Therefore, it is presumed that there are none. The Board, however, may exercise its discretion to require an explicit statement as to the existence of any related appeals and interferences.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

Appellant's brief includes a statement that for each ground of rejection applied to more than one claim, such additional claims, to some extent do not stand or fall together.

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

3,965,551	OSTROWSKI	6-1976
6,306,468	MADDOX ET AL	10-2001
6,103,317	ASAI ET AL	8-2000

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 4, 8, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ostrowski (US 3,965,551) in view of Maddox et al (US 6,306,468).

As to claims 1, 2, 4, 8, 9, Ostrowski discloses a process for coating a steel tubing (See column 1, lines 5-8) comprising maintaining a predetermined amount of tension in the tubing along its length from strengthening rolls 24 to the take-off assist device 44 (See column 6, lines 6-69; column 7, lines 1-23), applying a thermally curable coating including powder coating compositions, e.g. of acrylics (See column 4, lines 1-13) to the portion of the steel tubing while advancing the portion through a coating system (See Fig. 1; column 3, lines 22-25), and curing the coating using induction heaters (See column 3, lines 46-55; column 4, lines 48-57). The process further comprises washing, rinsing and drying the tubing prior to coating (See column 2, lines 31-45) under tension (See column 6, lines 6-13); and applying galvanizing material such as

zinc alloy (sealer) and optionally zinc chromate coating to provide even greater resistance to oxidation (See column 2, lines 50-65; column 3, lines 3-9).

Ostrowski fails to teach that a coating is electron-beam curable material.

Maddox et al teach that the use of electron beam equipment and modified acrylic unsaturated coating compositions for free radical curing will reduce energy consumption for coating the exterior surface of tubing. The faster rate of polymerization of this coating composition allows for the replacement of a conventional oven or induction heater unit with an electron beam unit requiring much less floor space and generating much less heat. See Abstract. The reduce of tube metal temperatures will reduce or eliminate tube flexing or bending that are occasionally associated with the high metal temperatures generated by induction heaters to cure powder coatings (See column 6, lines 1-5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used electron-beam curable material instead of thermally curable coating in Ostrowski with the expectation of providing the desired reduced energy consumption and reduced tube flexing or bending, associated with the high metal temperatures generated by induction heaters, as taught by Maddox et al.

Claims 3, 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ostrowski (US 3,965,551) in view of Maddox et al (US 6,306,468), as applied above, and further in view of Asai et al (US 6,103,317).

Ostrowski in view of Maddox et al, as applied above, fails to teach that the process can be used for coating a steel sheet (Claim 3), metallic or non-metallic cable (Claims 5, 7), or non-metallic tubing (Claim 6).

Asai et al teach that polymeric cable or tubes or any other (continuous) articles (See column 2, lines 52-58) are suitable for coating continuously with electron-beam curable material (See column 8, lines 30-31).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a process of Ostrowski in view of Maddox et al for coating any continuous article including a metal sheet, non-metallic tube, metallic or non-metallic cable since Asai et al teach that any continuous article is suitable for coating continuously with electron-beam curable material.

(11) Response to Argument

Applicants' arguments filed December 29, 2003 have been fully considered but they are not persuasive.

(A) Applicants argue that Ostrowski cannot be combined with Maddox et al because Ostrowski does not suggest an electron beam curable compounds for use in coating the tube (See page 4 of Remarks), and Maddox et al do not suggest applying an electron beam curable material to a portion of material under tension (See page 5 of Remarks). Accordingly there is no teaching or suggestion located in the cited prior art to modify Ostrowski with Maddox et al (See page 6 of Remarks).

The Examiner respectfully disagrees with this argument. There is clear teaching or suggestion located in the cited prior art to modify Ostrowski with Maddox et al, because Maddox et al teach benefits of using electron-beam curable material instead of thermally curable powder coating in Ostrowski such as reduced energy consumption and reduced tube flexing or bending,

associated with the high metal temperatures generated by induction heaters while thermally curing powder coatings.

One of ordinary skill in the art at would have reasonable expectation of success in modifying Ostrowski with Maddox et al, because Maddox et al also teach coating of continuous steel tubing (See column 1, lines 9-11).

(B) Applicants argue that steps of washing, rinsing and drying under tension as recited in claim 8 are not taught by Ostrowski.

Ostrowski teaches that tension is controlled by controlling the take-off assist device 44 by monitoring speed of tubing at 24 rolls (See column 6, lines 28-37). Clearly, if tension is maintained by controlling speed at 24 rolls, tubing at 24 rolls or at cleaning station cannot be loose also. Since a tube is **continuous**, it is difficult to maintain tension at rolls 24 without maintaining tension at the cleaning station 16.

(C) Applicants argue that Asai is not combinable with Ostrowski in view of Maddox et al because Asai teaches radiation curing of water-blocking coatings where no solvents or water required while Ostrowski teaches the use of induction heaters as well as solvents for the treatment of the tube and Maddox et al teach the use of solvents and water for cleaning or treating.

A secondary reference of Asai is relied upon to show that that polymeric cable or tubes or any other (continuous) articles are suitable for coating continuously with electron-beam curable material.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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January 21, 2004

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